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## The Human Dimension of Elections: How Poll Workers Shape Public Confidence in Elections\*

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ABSTRACT

The role of voting technologies has received considerable attention since the 2000 election. However, the voter experience at the polling place and especially the voter-poll worker interaction is also of critical importance. Rarely are poll workers considered an arm of the government, even though they clearly operate as extensions of governmental actors as street-level bureaucrats. Poll workers exercise discretion in ways that directly affect the voting experience. We examine the relationship between voters' perceptions of the poll worker job performance and confidence that the election process produces fair outcomes and that ballots were counted accurately. In an ordered logit model, perceptions of poll workers is a significant predictor of both variables related to voter confidence in the presence of numerous controls suggesting that overlooking the recruitment and training of competent poll worker can have a detrimental effect on voter confidence.

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This paper examines the role that poll workers play in the perceptions that voters have about the overall quality of elections and democracy more generally. Although the 2000 election opened up a wide-ranging examination of the electoral process in the United States, there has been little consideration given to the role of administration and management in the electoral process and in confidence in election outcomes (c.f., Hall 2003; Alvarez and Hall 2006). Many studies have examined the performance of voting technologies (e.g., Alvarez, Ansolabehere and Stewart, 2004; Ansolabehere and Stewart, 2005), the implementation of various reforms like all-vote-by-mail in Oregon (e.g., Hamner and Traugott, 2004), the partisan nature of electoral administration (Kimball, Kropf, and Battles, 2006), and the consequences of reform (e.g., Berinsky, 2004). These studies have greatly expanded our understanding of specific aspects of elections, especially the role of voting technology and voting methods on vote counting and participation. However, little is known about the how the activities that occur within polling places on Election Day affect whether individuals have confidence in the way elections are administered as well as election outcomes.

This article has three components. First, we examine the role of poll workers and polling place activities in the election process and consider how they are similar to street-level bureaucracies. As street-level bureaucrats, poll workers can exercise discretion in ways that directly affect the experience of the voter. In addition, other polling place experiences, like having to wait in line, can also shape the voter's experience. Second, we examine the level of satisfaction that voters have toward various components of the voting process. Third, we then consider how a voter's satisfaction with the poll workers might affect how voters view two key attributes of elections: (1) confidence that the current election process produces fair election outcomes; and (2) confidence that the ballot was counted accurately.

## **Street-level Bureaucracy and the Poll Worker**

Although there has been a substantial focus on the role of voting technologies in elections since the 2000 election, the voter-poll worker interaction seems to be of critical importance. Unfortunately, there is not an extensive literature in political science or public administration regarding poll workers. The small literature that exists finds that poll workers are autonomous individuals working in many cases without direct supervision by managers; this autonomy creates numerous principal-agent problems for election officials (e.g., Alvarez and Hall 2006; MacDonald and Cain 2005; Bassi, Morton, and Trounstein 2006). To use the language of Brehm and Gates (1997), through working, shirking, or sabotage, poll workers can affect whether voters have a positive or negative voting experience.

Given the discretionary judgment they exercise in polling places, poll workers often make decisions that affect the quality of the voting experience. For example, a poorly run polling place may have long and confusing lines. Poll workers also decide to what extent they will follow laws and procedures. Historically, poll workers implemented many of the most egregious forms of election disenfranchisement by enforcing literacy tests, poll taxes, and similar barriers to voting (Keyssar 2000; Kousser 1974; Bassi, Morton, and Trounstein 2006). Additionally, survey data of polling places in Los Angeles County in 2002 found that poll workers varied in their knowledge of basic voting rights and election procedures (Barreto, Marks and Woods 2004). For example, almost 30 percent of the head poll workers surveyed stated that every voter had to show identification in order to vote, which is in direct conflict with California law governing voter identification. Additionally, 25 percent of polling places had not posted the “Voter Bill of Rights,” a large poster that states a voter’s rights at the polls, in the polling place. These differences may in part be

attributable to training, which has been found to vary widely across counties (MacDonald and Cain 2005).

The findings of the study of elections in Los Angeles are supported by evidence from other recent elections. For example, 7,000 voters in Orange County, California were given the wrong ballots in the 2004 primary election, which may have changed the outcome of several races (Sacramento Bee 2004). The Election Reform Information Project received several reports during the 2004 general election of poll workers not knowing how to use and issue provisional ballots (Cobb and Hedges 2004). Similarly, some voters in California noted that poll workers gave out inaccurate information and often did not seem to know what they were doing (MacDonald and Cain 2005). In specific instances in Ohio and Missouri, respectively, only an intervention by election lawyers led poll workers to issue provisional ballots or accept a utility bill as a form of identification (Cobb and Hedges 2004). In Nebraska, poll workers in several precincts were overwhelmed by voters, which led to long lines and to some precincts running out of ballots (Kotok 2004).

The difficulty finding poll workers may exacerbate some of these problems. As one person in the Secretary of State's office in California noted, "[The counties] only care about them [the poll workers] breathing as long as they do that and have a warm body, they're qualified" (MacDonald and Cain 2005). Furthermore, the potential for poll worker error increases when the law changes. For example, changes in the provisional voting law in Colorado led poll workers to not give out provisional ballots to qualified voters, according to several interest groups who monitor elections (Crist 2004).

Whether the problems occur through sabotage, shirking, or simply in the course of implementing a complex process, these cases related to poll workers are not unique, something that

led one election official to note that “Poll workers are the Achilles’ heel of the elections process” and another to note that “it seems remarkable that more problems do not occur” (Lush 2004). We treat all of these problems as conceptually similar when assessing their effect on the quality of the voting experience. We would expect voters who are turned away from a polling location or who stand in long lines to evaluate poll workers just as harshly as those who are treated rudely or who must endure a poll worker who does not know what to do. All of these encounters seem to be part of a larger concept of service that the poll worker would be expected to provide with a certain amount of competence and courtesy (Price and Arnould 1995).

The evidence from the media and the Barreto, Marks, and Woods (2004) work notwithstanding, poll workers are often characterized as kindly volunteers doing a civic duty. Rarely are poll workers considered an arm of the government or as a provider of a service, even though they clearly operate as extensions of a government agency and do provide a service to the voter.<sup>1</sup> And as the data from Los Angeles illustrate, although there are differences between the interactions that a client has with a welfare worker and the interaction a citizen has with a poll worker, the poll worker has the opportunity and power to act as a street-level bureaucrat. The historic use of poll workers to enforce discriminatory activities, especially the disenfranchisement of African Americans in the South and immigrants in New York, further supports the view of poll workers as extensions of the State (Keyssar 2000).

The role of street-level bureaucrats in public policy and administration has been a subject of great interest to scholars for more than 20 years. For example, research has focused on how street-level bureaucrats view issues of social justice (Kelly 1994), how they affect decision making and make policy in public organizations (Lipsky 1980; Prottas 1978; 1979) how they affect implementation (Keiser, Mueser and Choi 2004; Maynard-Moody, Musheno and Palumbo 1990),

how they use their discretion (Scott 1997) and how their discretion can be limited (Brehm and Gates 1997; Maupin 1993; Sowa and Selden 2003). Often, the rationale for studying street-level bureaucrats is in examining the level of autonomy that they have and how such autonomy can be constrained (Stone 1981). For example, Brehm and Gates (1997, 10-21) note that government workers can engage in accomplishing policy, undermining policy, or avoiding work altogether.

Lipsky (1980) argues that this autonomy puts street-level bureaucrats in the position of making government policy and decisions that affect the lives of the citizenry through their everyday actions. According to Lipsky (1980, xii) “public policy is not best understood as made in legislatures or top-floor suites of high-ranking administrators, because in important ways it is actually made in the crowded offices and daily encounters of street workers.” The decision of the street-level bureaucrat represents the policy that the citizen who seeks out government service receives, regardless of whether the service reflects what that person should receive under law. In the case of elections, poll workers make such decisions in the interactions voters have at the polls on Election Day. Poll workers configure the polling place, determine where and how voter information is displayed, determine whether a voter is eligible to vote—and, if not, whether the voter is given a provisional ballot or told to go to a different precinct. Poll workers are also in a position to treat voters differently in how they interact with them. For example, a poll worker may give better instructions on how to correctly complete a ballot to some voters but not others.<sup>2</sup>

Although many people focus on the decision-making and policy-making powers of street-level bureaucrats, powers that are clearly illustrated in the examples from Los Angeles, we are especially interested in Lipsky’s discussion of how citizens are both consciously and subconsciously reactive to how they are treated by street-level bureaucrats.<sup>3</sup> Numerous studies of public attitudes regarding their interactions with government have been conducted. Goodsell (1994,

chap. 2) discusses the Harris Poll results to a series of questions about whether people were satisfied with their experience with the government and whether they found people in government agencies were helpful or not helpful. He finds that the public tends to see the federal government as more helpful than state or local governments, and are more satisfied with federal actors. By contrast, more than one-third of respondents find local governments to be not helpful and are not satisfied with their experience. Moreover, in state level data from Michigan from the 1970s, 43 percent of respondents were very satisfied with their bureaucratic encounter and 43 percent also thought the government agency they encountered was very efficient. Additionally, 76 percent of respondents thought they were treated fairly. Goodsell (2004, chap. 2) reports data from Virginia which finds that the public tends to be positive about local public services, with between 81.3 and 91.5 percent of respondents finding services from the fire department to public schools to public recreation to be either excellent or good. It seems reasonable to conclude that the more helpful a government is, the more positive the public's assessment of it will be.

We are interested in assessing the public interactions citizens have with poll workers. Specifically, we are interested in examining how a person's interaction with poll workers affects the person's attitudes about the policy and goals related to the activity in question. In elections, the experience that voters have with street-level bureaucrats may directly affect the views that the public has about the democratic process. If voters have a poor experience with their poll worker, it could affect their view of the electoral process more broadly, since this is seen by many as being an integral component of the voting process. Previous research has shown that the 2000 election affected people's perceptions of government broadly. For example, Price and Romantan (2004) found that the experience of the 2000 election affected confidence in government institutions, with confidence in the Supreme Court and the Presidency becoming more polarized along party lines



from August 2000 to February 2001. Likewise, Hansen (2002, 121-130) found that there was a marked decline in confidence in the fairness of the last election after the 2000 election compared to after the 1996 election. Granted, the 2000 election dispute was a highly intense experience that continued over 37 days and provoked extensive media coverage. We are examining a much smaller but more pervasive issue, which is whether poll worker-voter interactions affect the attitudes of voters regarding election fairness and confidence in the vote counting process. We do not conceptualize these forms of trust as sub-categories of general trust. In the one national study of voter confidence, the authors review the literature on trust in government and confidence and note that there is no *a priori* reason to assume that confidence in the voting process is a sub-category of general trust in government (Alvarez, Hall, and Llewellyn 2006).

In our analysis, we examine the experience that voters had interacting with poll workers and how this experience varies across demographic groups. Our expectations here are somewhat limited. Some previous research would suggest that more vulnerable populations—the old, the less educated, the less affluent—will have less efficacious interactions with street-level bureaucrats (e.g., Lipsky 1980). However, other work suggests that some street-level bureaucrats work very hard to compensate for any biases and attempt to promote fair outcomes for all (e.g., Kelly 1994). The typical view of the poll worker as the conscientious volunteer makes the latter option as likely as the former. This may be especially true if the voter knows the poll worker (Nelson 1981).

Based on previous research on public confidence in elections and on the importance of government-citizen interactions on government performance, we expect several factors to affect the confidence and satisfaction measures identified above. First, we expect the quality of the interaction between the citizen and the poll workers to affect public confidence and satisfaction. We measure these attributes of poll workers using questions eliciting the respondent's evaluation of

their experience at the polling place, specifically their evaluation of the poll worker. Second, we expect partisanship to affect satisfaction and confidence, with the winning partisans (Republicans) having more confidence than the losing partisans (Democrats). Previous research (Price and Romantan 2004) suggests that partisan affiliations should factor into public confidence. Third, we asked a set of standard demographic questions. Here, there is some expectation that older and better educated voters will be more confident and satisfied, given their previous experiences with voting and their knowledge of the system.

### **Data and Methodology**

In order to examine how Election Day experiences affect public confidence in elections, we conducted four surveys. Two surveys examined the voting experience in the 2004 and 2006 general elections in Utah and two surveys did the same in 2006 in Franklin and Summit Counties in Ohio. During the 2004 election, the state of Utah was still using a punchcard voting system that had been in place for many years. Both voters and poll workers were quite familiar with the old system. The 2004 was the last statewide general election on the old punchcard system. To comply with the requirements of the Help America Vote Act (HAVA), Utah adopted the Diebold TSX touchscreen voting system for the 2006 elections. The system was first used in a June 2006 primary and then in the November 2006 general election. The importance of examining these two elections is that they represent two very different voting experiences—one with familiar paper-based equipment and the other with an entirely new electronic system. This allows us to examine the effect of poll workers on voter confidence while some significant changes in the election system are occurring.

Ohio was of interest to the project for two reasons. First, is the significant attention election administration and the voting experience in Ohio received during the 2004 election. Second, like many other states, Ohio made a statewide transition in voting machines during the primary elections

preceding the November 2006 elections. Summit and Franklin were selected because they are “typical” of counties in Ohio, have large diverse populations, are close to major research universities, and each county selected a different type of voting equipment. All but two counties in Ohio selected touchscreen voting equipment, and Summit is one of the two counties that did not. Summit County uses an ES&S Model 100 precinct count optical scan system and Franklin County uses an ES&S iVotronic DRE touchscreen voting machine. The Ohio data allow us to examine differences across counties using different voting technologies within the same state and add additional external validity to our findings.

Beginning in 1982 and in every biennial general election since then, students and faculty from Utah colleges and universities have successfully conducted a statewide exit poll in Utah. The two Ohio surveys mirror methodologically the Utah exit poll. The exit polls employ a stratified multistage cluster sample patterned after the sample design developed for national exit polls (c.f. Mitofsky and Edelman 1995). The first survey used in this paper is a post election Internet survey of Utah general election voters with a sample drawn from exit poll participants from the 2004 Utah Colleges Exit Poll. The other three surveys presented are from Election Day exit polls conducted in Utah and Ohio on Election Day in 2006. The exit polls were part of a larger research project evaluating satisfaction with the voting experience.

In each survey, we asked survey respondents a series of questions about their confidence in the election process that were adapted from the National Election Study. The following two questions serve as the dependent variables in the subsequent analysis:

- How confident are you that the current election process in Utah/Ohio produces fair election outcomes? Very confident, somewhat confident, not too confident, not at all confident.

- How confident are you that your ballot was counted accurately in the 2004 election?  
Very confident, somewhat confident, not too confident, not at all confident.

The survey data for this paper are from the Utah Voter Poll (UVP), an Internet survey of Utah residents conducted between June 22 and July 1, 2005, the 2006 Utah Colleges Exit Poll (UCEP), a statewide academic exit poll conducted on Election Day in November 2006, and the Ohio Colleges Exit Poll. UVP participants are a panel of actual Utah voters recruited on Election Day 2004 to be a part of occasional Internet surveys about politics and public policy. As part of the 2004 Utah Colleges Exit Poll, voters were selected using standard systematic sampling procedures as they exited their polling place and were then given information inviting them to join the Internet survey panel. Thus, unlike Internet surveys conducted with convenience samples, the sampling pool for the UVP is a representative sample of Utah voters. The initial sampling pool for the UVP included 1,941 email addresses. At the time of the June 2005 UVP, 1,514 panel members had a valid email address that received at least one email. There were 379 fully completed surveys with responses to at least one question from 399 respondents.<sup>4</sup> The response rate was 26 percent.<sup>5</sup> The actual survey questions referenced in this paper, the marginal frequencies, and a description of methodology and weighting procedures are included in the Appendix.

The 2006 Utah exit poll was designed to provide estimates for election outcomes at both the congressional district and statewide levels. The Ohio exit polls were designed to provide vote estimates at the county level. The samples in all three exit polls are a multi-stage Probability Proportionate to Size (PPS) sample of voters leaving 104 polling places in Utah and 50 polling places in each Ohio county on Election Day in November 2006. In Utah, counties and then polling places within counties are selected using PPS sampling; in Ohio, polling places were selected using PPS sampling. Within each voting place, voters are selected systematically throughout Election Day

using a random start and a fixed interval. The values for the sampling interval are based on a projected turnout for each voting place using a past comparable election. Interviewing begins when the polls open and continues all day until voting ends. In Utah approximately 1750 interviews were completed at the 104 polling places in 2006. In Ohio 50 polling places were sampled in each county with 1,113 completed surveys in Franklin County and 1,301 completed surveys in Summit County. The response rates were 59 percent for Utah, 54 percent for Franklin County, and 46 percent for Summit County.<sup>6</sup> The actual survey questions referenced in this paper, the marginal frequencies, and a more detailed description of methodology and weighting procedures are included in the Appendix.

### **The Public Interaction with the Street-Level Bureaucracy**

We start our analysis by considering how the voters rated the job that poll workers performed. As Table 1 shows, in the 2005 Internet survey, evaluating the 2004 election, we find that there are differences based on income, education, race, and party affiliation. Poor voters—those with incomes under \$25,000—were much less likely to rate the job performance of the poll worker as excellent, compared to other income categories. However, those in the next highest income category—between \$25,000 and \$39,000—had the second highest rating. For education, the results are more linear; respondents with a high school education or less rated the job of precinct poll workers much lower than those with a post-graduate education, and 7 percentage points lower than individuals with some college education. Likewise, non-whites rated the experience lower than whites. Republicans had very high ratings—two-thirds rated the poll workers excellent—compared to just over half of Democrats and 37.8 percent of independents.<sup>7</sup> Men also rated their experience with their poll workers lower than did women.<sup>8</sup> Similar findings exist in the 2006 Utah survey results, but the differences are less pronounced.

[Table 1 about here]

The findings from Ohio tell a similar story but with some interesting differences. Unlike Utah, gender does not make much of a difference in the ways in which voters in Franklin and Summit counties evaluate the quality of the poll workers, although overall ratings are more positive for the poll workers in Franklin County. Similar to Utah though, age matters in both Ohio counties with older voters generally providing more positive evaluations than younger voters. The effects for income are roughly similar between Utah and the Ohio counties with higher-income voters generally evaluating the poll workers more favorably. However, the relationship in the two Ohio counties is not as pronounced. Voters at the highest income levels in Franklin and Summit counties are not as likely to rate the poll workers as favorably as voters in some lower income brackets. Education also produces a slightly different effect in the two Ohio counties than it does in Utah. In Utah, more educated voters evaluated the poll workers more positively than less educated voters. However, the relationship is reversed in both Franklin and Summit counties with more educated voters often giving more critical evaluations than less educated voters. The relationship between the two variables is not monotonic, but it is different from Utah.

Similar to the relationship found in Utah, white voters in Franklin and Summit counties are more likely to rate the poll workers positively than are non-white voters. Almost 74 percent of white voters in Franklin County and almost 66 percent in Summit County rate the poll worker job performance as “excellent.” Only 63 percent of non-whites in Franklin County and 60 percent in Summit County provide the same rating. Finally, and possibly reflecting recent electoral fortunes, Democrats in both counties are less likely to give poll workers excellent ratings, although this result is not pronounced in Summit County.

Overall, we generally find low income, low education, and minority voters generally reporting a lower quality experience compared to their high income, high education, and white counterparts. Additionally, we also see a partisan dimension here, with Democrats rating the experience lower than Republicans.

### **Polling Worker Interactions and Public Confidence**

We now turn to Tables 2 and 3, where we examine how respondents answer the two questions related to trust and confidence in the electoral process. The first question, shown in Table 2, is “How confident are you that the electoral process produces fair election outcomes?” Being very confident in a fair outcome varies across a number of factors including education, race, partisanship, religious affiliation (in Utah), and the ratings of the poll worker.<sup>9</sup> Four of these independent variables are of particular interest to us. First, looking at the Utah data, educational attainment is positively correlated with confidence in fair outcomes. However, the same relationship does not hold for the two Ohio counties where education does not seem to produce any effect. Race does not produce any effect in Utah, where the number of minority respondents is relatively small. However, in both Ohio counties, large differences exist between whites and non-whites.

With regard to partisanship, Republicans in all of the jurisdictions and in all of the surveys are more likely to report that the election process produces fair outcomes. However, the percentages in Utah (71.9 percent and 74.0 percent) are much higher than the percentages reported for Franklin (66.5 percent) and Summit (53.9 percent) counties. Finally, although there is a significant spread on all of the variables that measure the quality of the voting experience, the largest one is the respondent’s rating of the job performance of the poll worker. Almost 72 percent of those individuals from the 2004 Utah survey who rated their experience with their poll worker as

excellent were very confident in the fairness of the electoral outcome. Only 34.6 percent were confident that the election process produces a fair outcome for any other rating of the poll worker. The difference was almost 20 percentage points in Franklin and Summit counties, although both of the counties started from a lower baseline. Consequently, as hypothesized, the voter-poll worker interaction is important to a voter's attitude about the fairness of electoral outcomes.

[Table 2 about here]

The second question, shown in Table 3, asked, "How confident are you that your ballot was counted accurately in 2004?" We see again that education, party affiliation, race, and the voting experience questions producing interesting differences. The patterns are, however, similar to those exhibited in Table 2. In the Utah surveys, educational attainment matters, but there is no linear effect in the data from the two Ohio Counties.

Almost three-fourths of Republicans in Utah were very confident that their ballot was counted accurately, compared to 34 percent of Democrats. Seventy-four percent of Republicans in Franklin County and almost 67 percent in Summit County were very confident. Democrats were less confident in Franklin County (39.6) than they were in Summit County (45.4). Race also plays a factor in all four surveys. White respondents in all three electoral jurisdictions express more confidence in the accuracy of the ballot counting than non-white respondents. The gap is about 14 percentage points in the two Ohio counties and about 11 percentage points in the 2006 Utah exit poll.

[Table 3 about here]

Almost three-quarters of those in Utah who rated their poll worker interaction excellent were very confident that their vote was counted accurately, compared to 40.6 percent for the other rating categories.<sup>10</sup> Slightly more than 60 percent of those who rated their poll worker interaction



excellent in Franklin and Summit counties were very confident that their ballot would be counted accurately. Similar to Utah, only about 40 percent of voters in the two Ohio counties who gave their poll workers another rating expressed such confidence. Again, we see the importance of voter-poll worker interactions in the voters' confidence regarding whether their ballots were counted accurately. Given that poll workers are the individuals responsible for getting the ballots to the central election administration at the end of the election—as well as doing the ballot counting in many states—a voter can reasonably link the poll worker to the counting of their ballot.

A multivariate analysis will give the clearest picture of whether or not the voter-poll worker interaction, evident in the bivariate analysis, persists in the presence of statistical control variables. Given the ordinal nature of the confidence and satisfaction questions, we examine these data using ordinal logistic regression and present the results of eight such models in tables 4 and 5.<sup>11</sup> The partisanship and street-level bureaucracy variables (the job performance rating of the poll worker) are the most consistent across all eight models and reflect the bivariate results presented in tables 2 and 3.

Across all models, the general inferences are the same for all key variables. The primary difference is that, in Ohio, the baseline level of confidence is lower compared to Utah. Examining specific factors we see that, compared to the baseline category of independents,<sup>12</sup> Republicans are uniformly more likely to view the questions in a more positive direction, scoring each dependent variable in its highest, most positive category and Democrats are uniformly more likely to be negative, scoring each dependent variable lower. We also see that rating the job performance of a poll worker as excellent continues to produce high levels of confidence. That this effect holds firm in the face of a host of control variables suggests that the effect of the voter-poll worker interaction is real. The literature on the importance of street-level bureaucrats suggested this possibility but to

our knowledge this is the first time this effect has been reported. There are some other statistically significant coefficients in the models for some of the age dummy variables, but the patterns appear to be idiosyncratic. Neither the patterns for the age variables in the bivariate analysis in tables 2 and 3 nor the multivariate analysis in tables 4 and 5 reveal a consistent effect of age.

[Tables 4 and 5 about here]

Given our interest in street level bureaucrats and their potential impact on confidence in the election system, we convert the coefficients for the job performance of the poll worker into predicted probabilities.<sup>13</sup> Table 6 contains the predicted probabilities of each level of confidence in a fair outcome as the evaluation of the poll worker changes from zero (good/fair/poor) to one (excellent),<sup>14</sup> holding all the other variables in the model constant at their modal values.<sup>15</sup> In Utah, when the evaluations of the poll worker change from less than excellent to excellent, the predicted probability of being very confident in the fairness of the outcome rises from 0.38 to 0.74 in 2004. In 2006, this predicted probability rises from 0.57 to 0.77. There is a corresponding drop in the probability of being somewhat confident from 0.54 to 0.25 in 2004 and from 0.36 to 0.20 in 2006. The probability of being not too confident or not at all confident in a fair election outcome remains relatively constant and near zero, reflecting the reality that a very small proportion of voters actually expressed these attitudes. In both Ohio Counties, the predicted probabilities start at a lower baseline. Because voters are actually distributed across all four categories we see real changes in predicted probabilities in response to a change in the poll worker evaluation. However, the changes have similar characteristics to the changes in Utah. In Franklin (Summit) County, when the evaluation of the poll worker changes from less than excellent to excellent, the predicted probability of being very confident in the fairness of the outcomes rises from 0.14 (0.12) to 0.24 (0.22). When we examine the not at all confident and not too confident responses, as the evaluation of the poll worker changes

from less than excellent to excellent, there is a decline in the predicted probabilities, as was hypothesized. The probability of being somewhat confident in the fairness of the outcome actually goes up slightly in both counties, reflecting the lower baseline.

[Table 6 about here]

In the bottom half of Table 6, we present the findings of a similar analysis for the predicted probability of the voters' confidence that their ballot was counted accurately. The same patterns that were found for the fairness of the election are found again with the confidence dependent variable. In Utah, as the voter's evaluation of the poll worker moves from less than excellent to excellent, we see a sizable increase in 2004 and large but comparably smaller increase in 2006 in the probability that a voter thinks that their ballot counted accurately. Likewise, in Franklin and Summit Counties there is a very sizable increase in the probability that the voter thinks that their ballot was counted accurately based on the evaluation of the poll worker. In Utah, we also see a corresponding decrease in the probability of being somewhat confident that their ballot was counted accurately and virtually no change from zero for not at all confident and not too confident. In Ohio, we again have more respondents across all four levels of confidence in the ballot counting process and so there is more movement across the categories. As the poll worker evaluations improve in the less confident categories, there is a decline in the probability. This reflect that confidence in the poll workers likely moves voters into the very confident category.

A striking result in Table 6 is that, in Utah, the relatively high probability of being very confident the ballot would be counted accurately even if the evaluation of the poll worker is not excellent. At the modal values, the probability of being very confident begins above 0.69 and rises. The difference between this high modal value in Utah, compared to the baseline rates of 0.23 (0.35)

rates in Franklin (Summit) County, may be reflective of the problems that have occurred in Ohio in recent elections and the high level of media coverage that these problems have received.

In each model, the evaluation of the poll worker produces statistically significant effects and substantively meaningful changes in predicted probabilities. The probability changes are largely confined to the top categories of the dependent variables in Utah, but this is not too surprising given the actual distributions of responses to those questions among Utah voters. The notable result is that in a state that by all accounts has clean elections and competent election administration, the voters' evaluations of the job the poll workers are doing is a significant predictor of the confidence in the outcome and their confidence that the ballots are accurately counted.<sup>16</sup>

### **Conclusions and Implications**

The razor-thin margin in the 2000 presidential election and the subsequent controversies prodded politicians and average citizens to take notice of the mechanisms and laws that structure how Americans vote. The public outcry resulted in legal reforms and government investment in new voting technologies. Various states sought ways to improve and modernize the voting process. They changed their laws to clarify the use of provisional ballots and purchased electronic voting machines or optical scan technologies to replace the old punch card machines. They hoped that such changes would help the public retain its confidence in the voting process.

Most of the reforms, however, did not address a critical aspect of the voting process: the poll workers who administer the changes in the law or help citizens understand new voting technology. The interaction that voters have with poll workers at polling places can exert a cost on voters. These "street-level bureaucrats" can make the voting experience pleasant and rewarding; they can also make it difficult and miserable. Poll workers bridge the gap between what the government intends and what the citizen experiences.

We find that, across all jurisdictions studied, poll workers matter. When measuring the impact on confidence that the current process produces a fair outcome or that the ballot is counted accurately, the effect of the quality of the poll worker remains consistent and significant. These effects persist even when controlling for the standard measures of socio-economic status and partisanship. When a voter rates the quality of the poll worker as “excellent,” that voter is more likely to express more confidence in the process.

The findings presented here suggest that more research needs to be done on how the poll worker affects the voting experience. We only have a single measure of the job performance of the poll worker and cannot discern any additional information about what actions, knowledge, or other characteristics of poll workers instill more or less confidence in voters. In addition, we can only infer from what voters report about the voting experience. A research design that includes information on the characteristics of the voting place, the characteristics of the poll workers, and the attitudes of the voters who vote there would provide an even more valid assessment of the importance of poll workers to the process.

However, as American democracy grapples with the critical task of improving the election process, policy makers should not ignore one of the most important lessons learned in other policy areas: the people who apply the policy matter as much as the policy itself. As one recent analysis of election administration in the 2004 election stated: “Administering elections requires ample resources. Administering them well requires even more” (Highton 2006, 68). Our results suggest that in addition to investing resources into improving the technology of voting by moving to electronic voting equipment, as many jurisdictions are poised to do under the HAVA, election administrators should also invest significant resources into training poll workers to use the new equipment and to otherwise interact well with voters. Voter confidence in the electoral process

depends on it.

## **Appendix: Methodology, Question Wording, and Frequency Distributions**

### **Utah Voter Poll Methodology**

The methodology section of the paper contained a brief description of the procedures followed to collect the Utah Voter Poll (UVP) data. Because of the unique nature of the sample design and survey methodology, this appendix contains additional details on the representativeness of the sample.

We recruited voters to the UVP using a recruitment questionnaire that was distributed among the regular exit poll questionnaires. The recruitment questionnaire had only four demographic questions: party identification, sex, age, and Internet usage. There are five iterations of data collection in the study. They are: all exit poll respondents (excluding the recruitment form), all recruitment form respondents, recruitment form respondents who gave an email address, and respondents to the June/July 2005 UVP. Consequently, we can only compare the four demographics listed above across these five iterations.

Party identification proportions generally held strong across the study, but there was some loss of representation for strong Democratic partisans. However, as time passed the number of strong Democrats decreased substantially. In the exit poll, 11.1 percent of respondents were strong Democrats; in the two UVP polls, their numbers had fallen to 7.1 percent and 5.6 percent, each statistically different than the exit poll. In the last UVP, the number of independent leaning Republicans increased considerably to 21.5 percent. The recruitment form respondents that gave email addresses were significantly more Republican than the overall exit poll respondents. The proportion of strong Republicans that filled out a recruitment form with an email address shot up to 41.6 percent compared to 36.7 percent in the exit poll.

Overall, the two sexes were consistently represented in all of the iterations. The general respondent poll for the exit poll and the recruitment form trended female; however, more males responded to the UVP. The June/July 2005 UVP saw a huge increase in males, making up 55.5 percent of the respondents compared to 46.1 percent in the exit poll. The January/February 2006 UVP had more males than females, and was close to being statistically different than the exit poll's make up.

Contrary to what might be assumed, UVP respondents did not frequently fall into the 18 to 24 year old demographic. The exit poll's 18-24 year old respondents made up 14.4 percent of its total, but the two UVP polls had only 8.8 and 7.7 percent of their respondents in that demographic. A web-based poll should also see a decrease in representation for older demographics because of their technology use habits. The UVP did see this trend, but only in the oldest bracket. Whereas, 9.9 percent of all exit poll respondents were 65+, sixty-five+ respondents composed only 4 percent and 6.2 percent of their respondents. The June 2005 poll saw an increase in the representation of the 25 to 34 year old bracket, and the January 2006 poll had a marginally significant increase in the 35 to 44 demographic. So the UVP did have slightly younger respondents, but the respondent base was cut at its tails, with the youngest and oldest respondents having statistically lower rates of participation than in the exit poll.

Internet usage data indicates that UVP respondents are prolific Internet users. 61.5 percent of all exit poll respondents use the Internet daily. About 72 percent of the recruitment form's respondents use it daily, and 77 percent and 87 percent of respondents to the UVP polls use the Internet daily. Frequent Internet users are overrepresented in the UVP, which is unsurprising given its mode of dissemination.



### *UVP Weighting Procedures*

The raw data were statistically adjusted using a technique called “rim weighting” to correct for potential non-response error and potential coverage error. Non-response error would occur if the non-respondents from our sampling pool (the email addresses collected on Election Day 2004) differed significantly from our actual respondents on their responses to the survey items. Coverage error would occur if the group that opted into the Utah Voter Poll on Election Day differed significantly from the group that we are really trying to survey and draw inferences about (all Utah Voters). It is impossible to be absolutely certain about the existence of non-response and coverage error, and weighting uses information known about the population to minimize the chances of non-response error and coverage error.

Internet users tend to be over-represented by those with higher incomes, higher levels of education, younger people, and men. The weighting procedure used here takes the distributions for age, education, income, gender, and party identification from the 2004 Utah Colleges Exit Poll and uses them to statistically adjust the data so that respondents belonging to overrepresented groups are given less weight in the analysis and those in underrepresented groups are given more weight. Rim weighting is when the weights are applied iteratively, one variable at a time, until the distributions for all of the variables of interest closely reflect their population targets. When the weights are applied, the categories for education, age, income, and gender are within one percentage point of their actual values on the exit poll.

### **Utah and Ohio Exit Poll Methodology**

The sample designs in both Ohio and Utah build upon the sampling experience gained from the Utah Colleges Exit Poll since the poll’s inception in 1982 (Grimshaw et al. 2004). The statewide sampling strategy in Utah adds an additional layer of complexity to the sampling strategy

because the sample is designed to be accurate at the congressional district level in each of Utah's three congressional districts. Both Ohio samples are of a single county only, so the procedures followed in the remainder of this paragraph have limited application to Ohio. In order to have samples representative for the statewide U.S. Senate race and district-wide U.S. House of Representatives races in Utah, congressional district boundaries provide the first level of stratification. Further stratification with each district helps reduce variance, allowing for more precise predictions of election outcomes. Within each district, similar counties are grouped into strata according to their Democratic House of Representative vote in the most recent election. Once strata boundaries are created, prior election results are used to optimally allocate 104 polling places among the strata within the three districts. By Neyman Allocation, more polling places are allocated to those strata with larger populations and/or greater variance of voters. In Ohio, the sampling is limited to two counties making the process much simpler. For each of the two counties, strata were created based on past Democratic vote for US President and 50 polling locations were selected for each county evenly split between the strata.

Once the number of polling places assigned to each stratum has been determined voter turnout by polling place is estimated using voter registration and Election Day voting data for recent elections obtained from election officials. A linear regression model is estimated to predict county voter turnout based upon (1) the county's number of registered voters and (2) the type of races on the ballot. Then, having predicted the polling place's voter turnout for the entire day, we use time of vote data from past exit polling to estimate the average proportion of morning and evening voters in each county and apply them accordingly to polling places. We cannot determine proportional morning and evening vote per polling place because many polling place boundaries change from year to year. We used the morning/evening methodology to maximize limited volunteer interviewer

resources. The morning and evening design has the additional advantage of allowing interviewers traveling longer distances to work only a half day. Most importantly, this design feature improves sampling efficiency and coverage. Using the same interviewing resources with approximately the same sample size, variance estimates are lower using a sampling design with 50 polling locations, each for half a day, compared to the just 25 locations for the entire day. We sample polling places using Probability Proportional to Size (PPS) sampling based on the number of estimated voters to increase the precision of the estimates. We sampled 52 polling locations in Utah for interviewing during the first half of Election Day and an additional 52 locations (with replacement) for interviewing during the second half of Election Day for a total of 104 locations statewide. In each Ohio county we sampled 25 locations for interviewing during the first half of the day and an additional 25 for the second half of the day for a total of 50 per county.<sup>1</sup>

To obtain sufficient information on voter demographics, we depend upon receiving a certain number of completed surveys. Unfortunately, not all voters respond to our surveys. To compensate, we predict the proportion of voters who will not respond to surveys and interview more voters to achieve our desired number of completions. To predict nonresponse for counties, we use a log-linear model based on the assumption that nonresponse follows a Poisson distribution. The model includes registered voters and type of race for candidacy as auxiliary variables. Without historical data, we use nonresponse rates from counties similar in voting patterns and demographics.

Voters are randomly selected for the survey by computing a sampling interval of every  $n^{\text{th}}$  voter that is large enough to obtain a minimum of 100 completed surveys per polling location, compensating for projected turnout and nonresponse, and then use a random start between 1 and the sampling interval.

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<sup>1</sup> On Election Day in Summit County, Ohio our interviewers were prohibited by the precinct-level election officials at one location (contrary to Ohio law and court rulings) from conducting any interviews. Consequently the Summit County sample includes only 49 locations.

The sample design described above ensures unbiased estimates of election outcomes, and serves as the building block for determining weights. When we apply weights to the voters surveyed, the responses represent vote totals. Weights are formulated as the inverse of the voter's probability of selection. The weight equals the strata's estimated voter turnout,  $M_h$ , divided by the number of polling places sampled in the strata and number of responses in the specified polling place,  $n_h$  and  $m_{hi}$  respectively. The weights are computed following the formula below:

$$w_{hi} = \frac{M_h}{n_h m_{hi}}$$

Volunteer student interviewers staff the polling places and conduct interviews on Election Day. Interviewers attend hour-long training sessions to give instruction on approaching voters, answering the most frequently asked questions or objections and avoiding refusals, calling in the data, and working with local election officials. Volunteer interviewers work in teams of three to four and are monitored and aided throughout the day by roving "crisis" teams who are specially trained to handle the unavoidable issues that appear in any project of this magnitude. A more detailed summary on the general methodology of the Utah Colleges Exit poll is available from Grimshaw et al. (2004).

### Question Wording and Frequency Distributions

How confident are you that the current election process in [Utah/Ohio] produces fair election outcomes?

	Utah Voter Poll	Utah Exit Poll	Franklin County	Summit County
Very confident	56.8	64.1	43.5	40.1
Somewhat confident	36.2	29.3	41.6	46.5
Not too confident	5.5	4.9	10.8	9.7
Not at all confident	1.5	1.7	4.1	3.7
N	388	1667	1095	1284

How confident are you that your ballot will be counted accurately in this election?

	Utah Voter Poll	Utah Exit Poll	Franklin County	Summit County
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Very confident	61.1	71.3	55.2	54.7
Somewhat confident	33.6	24.0	34.5	36.7
Not too confident	4.0	3.7	7.6	6.4
Not at all confident	1.3	1.0	2.7	2.2
N	389	1632	1086	1278

What year were you born? [Coded into categories]

	Utah Voter Poll	Utah Exit Poll	Franklin County	Summit County
18 to 24	14.6	9.4	6.6	7.8
25 to 34	24.0	18.2	16.5	15.7
35 to 44	19.7	19.6	24.0	22.6
45 to 54	19.8	23.1	28.3	24.8
55 to 64	12.7	16.6	16.6	17.0
65+	9.3	13.1	8.1	12.1
N	379	4824	1018	1207

Are you: [coded into a dummy variable, male=1]

	Utah Voter Poll	Utah Exit Poll	Franklin County	Summit County
Male	45.3	47.3	46.2	47.5
Female	54.7	52.7	53.8	52.5
N	380	4830	1034	1204

Generally speaking, do you consider yourself to be a(n):  
[Democrat=1, 2, 3; Republican=5, 6, 7; missing=8, 9, 10]

	Utah Voter Poll	Utah Exit Poll	Franklin County	Summit County
1. Strong Democrat	9.6	11.8	22.8	25.9
2. Not so strong Democrat	3.6	4.0	5.7	7.0
3. Independent leaning Democrat	9.2	10.1	14.6	15.8
4. Independent	8.7	8.8	12.0	10.8
5. Independent leaning Republican	12.4	13.5	8.2	8.9
6. Not so strong Republican	12.3	12.6	8.2	6.7
7. Strong Republican	31.1	33.7	16.6	15.5
Other	2.4	3.7	2.2	1.6
8. Don't know (UVP)	0.6	2.0	9.9	7.8
8. Don't know/No answer (Exit Polls)	0.3	—	—	—
9. No answer (UVP)	0.3	—	—	—
N	381	4857	1113	1301

What was the last year of school you completed?

	Utah Voter Poll	Utah Exit Poll	Franklin County	Summit County
Eighth grade or less	0.0	0.3	0.4	0.3
Some high school	2.0	1.6	1.8	2.1

High school graduate	13.9	12.6	16.4	17.6
Some college	39.4	35.6	27.2	30.0
College graduate	29.1	31.3	31.4	30.3
Post-graduate	15.7	18.5	22.9	19.6
N	380	4889	1040	1220

What, if any, is your religious preference? [coded into a dummy variable, Mormon=1]

	Utah Voter Poll	Utah Exit Poll
Protestant	5.2	4.8
Catholic	3.7	5.0
LDS / Mormon	67.5	70.3
Jewish	0.0	0.4
Other	6.4	4.1
No preference / No religious affiliation	12.8	10.8
Prefer not to say	4.3	4.5
N	381	4866

Are you: [coded into a dummy variable, white=1]

	Utah Voter Poll	Utah Exit Poll	Franklin County	Summit County
Native American	0.3	2.2	2.5	4.4
Asian	0.2	0.7	1.3	1.3
Black/African American	0.9	0.4	15.8	8.1
Hispanic / Latino	1.3	2.8	0.7	0.7
White / Caucasian	95.8	92.5	77.2	84.0
Pacific Islander	0.6	0.4	0.2	0.1
Other	0.8	1.0	2.2	1.6
N	380	4841	1036	1211

What do you expect your 2006 family income to be?

	Utah Voter Poll	Utah Exit Poll	Franklin County	Summit County
Under \$25,000	15.9	12.8	11.7	12.4
\$25,000 - \$39,999	18.6	15.4	13.7	14.4
\$40,000 - \$49,999	12.6	12.1	9.8	12.4
\$50,000 - \$74,999	25.0	24.5	22.1	20.9
\$75,000 - \$99,999	13.7	16.8	16.4	18.1
\$100,000-\$149,999 (UVP)				
Over \$100,000 (Utah Exit Poll)	9.9	18.4	11.0	10.4
\$100,000-\$124,999 (Ohio Exit Polls)				
\$125,000 - \$149,999 (Ohio Exit Polls)	—	—	4.8	3.7
Over \$150,000 (UVP/Ohio Exit Polls)	4.3	—	10.6	7.7
N		4658	973	1135

## Endnotes

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1. Even when poll workers operate to implement a party election, such as a primary election, they are paid by the state for the work they conduct and implement their work within a legal framework designed by the state. They are recruited and trained by the government.

2. The authors and other scholars have noted this level of discretion provided to poll workers in various election observation studies. For example, see Alvarez, Atkeson, and Hall 2007).

3. See especially Lipsky 1980, 9-10 and 93-94.

4. The margin of error for a simple random sample with a sample size of 422 is about + or – 4.7 percent. For a slightly smaller sample size (379) this would be about 5 percent. The 2004 Utah Colleges Exit Poll has a more complicated sample design and a “design effect” multiplier that will make the margin of error for the UVP slightly higher.

5.  $399/1514=26$  percent. Potential respondents were sent three invitations to participate, spaced a few days apart, over the survey field period. Our decision to send three invitations follows standard practices for Internet surveys seeking to maximize response rates with minimal field time and disruption to potential respondents. The marginal increase in completed surveys after three invitations is extremely small. Our response rate is actually higher than expected. Our inquiries with web survey firms suggested that given the length of the survey a response rate of about 20 percent was a reasonable expectation.

6. The response was calculated by dividing the number of completed interviews by the total number of completed interviews and refusals. The 2006 UCEP included three distinct questionnaires and the Ohio surveys had two distinct questionnaires. The sample sizes and response rates reported here are for the questionnaire that included items about the voting experience. The response rates for the other questionnaires are virtually identical.

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7. The partisan difference here could be attributed to the presence of partisan poll watchers at the polling place. In this survey this is unlikely for two reasons. First, in Utah elections poll watchers are not commonplace. The state is not competitive for most races and has a history of clean elections. Second, with the exception of waiting in line, Republicans rate everything more highly than Democrats. Moreover, the typical voter would likely be unable to distinguish between partisan poll watchers and poll workers in most contexts.

8. We did examine other aspects of voter-polling place interactions in the Internet survey. Many individuals rated as “excellent” the ease they had in finding their polling place (65.7 percent), the time spent waiting in line (50.8 percent), and the helpfulness of the posted information (42.1 percent). Lower income individuals and individuals with a high school degree or less were less likely to have an excellent experience finding their polling place. There were similar results in the evaluation of the amount of time an individual spent waiting in line. The results for the helpfulness of posted information are somewhat mixed. Non-whites rated the helpfulness of posted information much higher than did whites, and women rated it higher than men. However, in a multi-variate analysis, these factors were generally not predictive. Therefore, we focused on the voter-poll worker interactions.

9. We examined the issue of religion in Utah, given the state’s unique Mormon religious culture. We do find religion is an important variable in Utah. However, there is not a similar cultural importance of a single religion in Ohio.

10. There is also an interesting dynamic between the two Utah surveys. In 2006 Utah moved to electronic voting. Even with this significant change we still see similar gaps across education, party affiliation, religion, and the poll worker question. However, these gaps now occur from a higher level of confidence and satisfaction. For example, in 2004 only 29.5 percent of



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Democrats were very confident that the current election process produces fair outcomes. By 2006, 42.6 percent of Democrats were very confident that the current election process produced fair outcomes. Because the survey mode also changed between 2004 and 2006, we note this finding somewhat tentatively, given that the change in confidence may be somewhat related to the survey mode.

11. The distributions of both dependent variables are skewed, with a large majority of respondents classifying in the top two categories of the ordinal scales (very confident or somewhat confident). With such skewed distributions, it is possible to recode the dependent variables and estimate a simple logistic regression. Doing so produces very similar results and reproduces the major substantive findings in our analysis using the ordered logistic regression model.

12. Following Keith et al. (1992), we code independent “leaners” as if they are closet partisans. The baseline category includes only “pure” independents.

13. We used the SPost program running under STATA 9.2 (Long and Freese 2006).

14. We used a dummy variable and collapsed categories because so few respondents rated the job performance of the poll worker as fair or poor.

15. We use the mode and not the mean because our independent variables are either categorical or ordinal dummy variables. The modal values used in Figures 1-3 were: Gender (Male=1), Age (25-34=1) Religion (Mormon=1), Find the polling place (excellent=1), Parking (excellent=1), Waiting in line (excellent=0), Posted information (excellent=0), Party identification (Republican=1), Race, (white=1), education (College graduate=1), Income (\$50-74K=1).

16. In results not shown, we can see similar effects for partisanship and the evaluation of the poll workers for the voters’ overall level of satisfaction with democracy in the state.

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**Table 1, Poll Worker Job Rating by Demographics**

		2004 Election Utah	2006 Election Utah	2006 Franklin	2006 Summit
Gender	Female	63.5%	81.4%	70.3%	65.2
	Male	55.2%	77.0%	72.2%	64.4
	N	380	1589	1027	1196
Age	18 to 24	41.1%	71.8%	54.5%	46.2
	25 to 34	64.4%	76.9%	66.7%	50.0
	35 to 44	56.0%	74.7%	70.0%	67.0
	45 to 54	62.2%	78.8%	75.8%	68.9
	55 to 64	67.3%	83.3%	77.7%	69.5
	65+	68.6%	88.9%	72.3%	74.7
	N	379	1587	1011	1199
Income	Under \$25,000	45.8%	74.4%	67.3%	61.0
	\$25,000 - \$39,000	68.6%	77.7%	66.2%	67.7
	\$40,000 - \$49,000	58.7%	76.2%	79.8%	65.5
	\$50,000 - \$74,999	62.4%	77.7%	69.3%	65.1
	\$75,000 - \$99,999	70.0%	81.0%	78.0%	62.1
	Over \$100,000	58.5%	84.0%	68.8%	66.8
	N	371	1510	967	1126
Education Attainment	HS grad or less	51.7%	76.9%	73.7	68.3
	Some college	58.7%	78.5%	75.1	61.7
	College grad	62.2%	79.5%	66.4	65.2
	Post grad	66.1%	84.4%	70.9	62.6
	N	380	1608	1032	1212
Race	White	60.0%	80.5%	73.7	65.6
	Non-White	56.3%	69.0%	62.8	59.6
	N	381	1592	1028	1203
Party ID	Democrat	51.6%	74.2%	66.9	63.8
	Independent	37.8%	75.3%	75.0	64.7
	Republican	66.8%	82.9%	76.3	66.6
	N	367	1514	973	1172
Religious Affiliation	LDS	63.3%	81.9%	--	--
	Other Religious	51.7%	73.6%	--	--
	Non-Religious	55.4%	75.8%	--	--
	N	379	1532	--	--

Note: Cells contain percentage of respondents who rated the poll worker job performance as “excellent.”

**Table 2, Voter Confidence in Election Fairness by Demographics and Poll Worker Rating**

		Very confident current election process produces fair outcomes			
		2004 Utah	2006 Utah	2006 Franklin	2006 Summit
Gender	Female	55.6%	60.3%	39.7	34.7
	Male	58.5%	66.5%	46.9	43.9
	N	378	1582	1022	1195
Age	18 to 24	51.9%	57.7%	29.9	42.6
	25 to 34	59.3%	58.9%	31.5	36.9
	35 to 44	51.4%	66.3%	51.4	44.3
	45 to 54	56.0%	65.0%	44.0	36.6
	55 to 64	66.7%	65.8%	50.9	40.2
	65+	60.0%	66.5%	37.0	34.5
	N	377	1578	1006	1196
Income	Under \$25,000	48.3%	54.2%	42.0	32.4
	\$25,000 - \$39,000	65.7%	55.4%	27.3	36.8
	\$40,000 - \$49,000	53.3%	63.9%	39.8	29.7
	\$50,000 - \$74,999	49.5%	64.4%	43.9	34.3
	\$75,000 - \$99,999	64.0%	66.5%	53.8	46.6
	Over \$100,000	67.3%	73.0%	45.3	49.4
	N	370	1502	963	1125
Education Attainment	HS grad or less	46.7%	57.7%	42.8	38.8
	Some college	58.4%	60.5%	46.4	39.8
	College grad	59.6%	67.3%	40.4	39.8
	Post grad	60.3%	68.1%	45.3	37.8
	N	376	1599	1028	1209
Race	White/Caucasian	56.7%	64.2%	46.8	41.4
	Non-White	60.0%	60.0%	32.3	29.2
	N	378	1583	1023	1200
Party Identification	Democrat	29.5%	42.6%	26.9	28.2
	Independent	40.0%	61.1%	39.2	46.0
	Republican	71.9%	74.0%	66.5	53.9
	N	365	1506	421	1169
Religious Affiliation	Mormon	66.7%	71.2%	--	--
	Other Religious	33.3%	55.7%	--	--
	Non-Religious	38.5%	36.4%	--	--
	N	377	1525	--	--
Rating of Poll Worker	Excellent	71.6%	68.6%	49.1	46.6
	Other Rating	34.6%	44.0%	29.7	28.1
	N	385	1672	1093	1284

Note: Cells contain the percent of respondents who said they were “very confident” in response to each question.

**Table 3, Voter Confidence in Ballot Counting by Demographics and Poll Worker Rating**

		Very confident ballot was counted accurately			
		2004 Utah	2006 Utah	2006 Franklin	2006 Summit
Gender	Female	59.1%	70.4%	52.9	50.9
	Male	63.7%	73.2%	57.0	57.5
	N	379	1553	1013	1192
Age	18 to 24	50.0%	74.6%	47.0	46.8
	25 to 34	72.2%	71.5%	38.7	49.7
	35 to 44	57.3%	71.6%	62.9	55.9
	45 to 54	57.3%	71.2%	55.1	54.9
	55 to 64	67.3%	71.9%	64.4	58.4
	65+	62.9%	73.0%	54.2	53.5
	N	380	1551	998	1192
Income	Under \$25,000	49.2%	67.3%	53.7	50.7
	\$25,000 - \$39,000	68.1%	65.3%	43.1	55.2
	\$40,000 - \$49,000	55.3%	75.9%	47.3	41.7
	\$50,000 - \$74,999	54.8%	73.9%	56.9	52.6
	\$75,000 - \$99,999	80.4%	71.1%	67.1	63.5
	Over \$100,000	66.0%	78.3%	54.5	58.9
	N	372	1476	953	1121
Education Attainment	HS grad or less	40.0%	66.4%	57.2	53.8
	Some college	65.3%	72.8%	56.2	52.9
	College grad	63.6%	72.6%	51.2	57.2
	Post grad	66.1%	74.4%	57.3	50.6
	N	379	1570	1019	1203
Race	White/Caucasian	61.3%	72.7%	58.2	56.7
	Non-White	56.3%	64.0%	44.0	43.1
	N	380	1555	1015	1193
Party Identification	Democrat	34.0%	54.0%	39.6	45.4
	Independent	47.2%	63.2%	55.0	62.6
	Republican	74.5%	81.0%	74.4	66.8
	N	365	1478	963	1161
Religious Affiliation	Mormon	70.0%	78.3%	--	--
	Other Religious	41.4%	70.5%	--	--
	Non-Religious	43.1%	47.1%	--	--
	N	380	1498	--	--
Rating of Poll Worker	Excellent	74.7%	76.0%	61.2	62.0
	Other Rating	40.6%	55.4%	40.3	41.3
	N	388	1643	1084	1278

Note: Cells contain the percent of respondents who said they were “very confident” in response to each question



**Table 4: Ordered Logistic Regressions of Factors Affecting Voter Confidence in Election Fairness**

	Model 1 Utah 2004			Model 2 Utah 2006			Model 3 Franklin 2006			Model 4 Summit 2006		
Variable	Coef.	S.E.	p value	Coef.	S.E.	p value	Coef.	S.E.	p value	Coef.	S.E.	p value
Male	0.010	0.280	0.972	0.129	0.171	0.452	0.067	0.082	0.411	0.113	0.063	0.075
Age 25-34	-0.744	0.457	0.104	-0.184	0.316	0.560	0.005	0.304	0.987	-0.167	0.337	0.621
Age 35-44	-0.917	0.473	0.052	0.091	0.353	0.797	0.549	0.305	0.072	-0.320	0.326	0.326
Age 45-54	<b>-0.951</b>	<b>0.453</b>	<b>0.036</b>	-0.079	0.336	0.814	0.160	0.286	0.575	-0.506	0.315	0.109
Age 55-64	0.141	0.485	0.771	-0.089	0.324	0.784	0.523	0.313	0.094	-0.349	0.334	0.296
Age 65-plus	-0.756	0.821	0.357	0.061	0.363	0.867	0.170	0.381	0.656	-0.333	0.335	0.320
Mormon	0.348	0.351	0.322	<b>0.627</b>	<b>0.205</b>	<b>0.002</b>	--	--	-	--	--	--
Job performance of poll-workers—Excellent	<b>1.508</b>	<b>0.269</b>	<b>0.000</b>	<b>0.915</b>	<b>0.191</b>	<b>0.000</b>	<b>0.680</b>	<b>0.158</b>	<b>0.000</b>	<b>0.760</b>	<b>0.142</b>	<b>0.000</b>
Democrat	-0.742	0.553	0.179	<b>-0.824</b>	<b>0.327</b>	<b>0.012</b>	-0.381	0.238	0.109	<b>-0.837</b>	<b>0.209</b>	<b>0.000</b>
Republican	<b>1.043</b>	<b>0.435</b>	<b>0.017</b>	0.352	0.287	0.220	<b>1.271</b>	<b>0.252</b>	<b>0.000</b>	0.292	0.213	0.171
White	-0.358	0.572	0.532	-0.501	0.317	0.114	-0.002	0.001	0.094	<b>-0.001</b>	<b>0.000</b>	<b>0.021</b>
High School/Less	-0.133	0.604	0.825	-0.305	0.269	0.256	<b>0.499</b>	<b>0.252</b>	<b>0.048</b>	0.252	0.216	0.243
Some college	0.017	0.426	0.969	-0.319	0.256	0.214	0.335	0.229	0.143	0.223	0.212	0.291
College Graduate	-0.052	0.395	0.896	-0.240	0.258	0.351	0.173	0.202	0.391	0.058	0.189	0.757
Income \$25K	-0.453	0.571	0.428	<b>-0.758</b>	<b>0.333</b>	<b>0.023</b>	0.007	0.277	0.979	-0.464	0.261	0.076
Income \$25-39K	0.148	0.549	0.787	<b>-0.910</b>	<b>0.309</b>	<b>0.003</b>	-0.238	0.264	0.367	-0.346	0.248	0.163
Income \$40-49K	-0.555	0.584	0.341	-0.524	0.342	0.125	-0.132	0.261	0.613	<b>-0.708</b>	<b>0.286</b>	<b>0.013</b>
Income \$50-74K	-0.616	0.467	0.187	-0.465	0.287	0.105	-0.072	0.220	0.743	<b>-0.535</b>	<b>0.214</b>	<b>0.013</b>
Income \$75-99K	0.020	0.568	0.971	-0.499	0.308	0.105	0.239	0.233	0.306	-0.083	0.216	0.702
Cutpoint 1	-4.643	1.085		-4.402	0.682		-2.144	0.407		-3.963	0.433	
Cutpoint 2	-3.042	0.960		-3.014	0.638		-0.685	0.378		-2.410	0.403	
Cutpoint 3	-0.039	0.929		-0.676	0.630		1.701	0.380		0.189	0.397	
N	356			1364			898			1078		
Log likelihood	-259.67			-1065.0			-888.4			-1063.1		
Pseudo R2	0.1888			0.0998			0.0982			0.0664		
LR chi2	92.50, 19 d.f. p<.001			133.88, 19 d.f. p< .001			161.33, 18 d.f. p<.001			122.85, 18 d.f. p<.001		

Dependent Variable: How confident are you that the current election process in Utah/Ohio produces fair election outcomes?

**Table 5: Ordered Logistic Regressions of Factors Affecting Voter Confidence in Ballot Counting**

Variable	Model 1 Utah 2004			Model 2 Utah 2006			Model 3 Franklin 2006			Model 4 Summit 2006		
	Coef.	S.E.	p value	Coef.	S.E.	p value	Coef.	S.E.	p value	Coef.	S.E.	p value
Male	0.126	0.289	0.663	0.048	0.173	0.782	0.024	0.088	0.784	0.100	0.063	0.116
Age 25-34	0.839	0.534	0.116	-0.549	0.401	0.171	-0.482	0.318	0.130	0.075	0.328	0.819
Age 35-44	-0.073	0.565	0.897	-0.635	0.420	0.131	0.299	0.328	0.361	0.115	0.299	0.701
Age 45-54	-0.376	0.608	0.536	<b>-0.814</b>	<b>0.402</b>	<b>0.043</b>	-0.096	0.308	0.755	0.124	0.293	0.672
Age 55-64	0.625	0.601	0.298	-0.673	0.406	0.098	0.255	0.350	0.466	0.290	0.321	0.365
Age 65-plus	-0.026	0.824	0.975	-0.625	0.430	0.147	0.193	0.380	0.612	0.047	0.323	0.885
Mormon	0.278	0.427	0.516	<b>0.563</b>	<b>0.210</b>	<b>0.007</b>	--	--	--	--	--	--
<b>Job performance of poll-workers—Excellent</b>	<b>1.301</b>	<b>0.323</b>	<b>0.000</b>	<b>0.810</b>	<b>0.204</b>	<b>0.000</b>	<b>0.806</b>	<b>0.164</b>	<b>0.000</b>	<b>0.749</b>	<b>0.143</b>	<b>0.000</b>
<b>Democrat</b>	-0.669	0.562	0.235	-0.366	0.310	0.238	-0.405	0.245	0.099	<b>-0.722</b>	<b>0.214</b>	<b>0.001</b>
<b>Republican</b>	<b>0.959</b>	<b>0.437</b>	<b>0.028</b>	<b>0.672</b>	<b>0.280</b>	<b>0.016</b>	<b>1.028</b>	<b>0.270</b>	<b>0.000</b>	0.018	0.235	0.939
White	0.217	0.686	0.752	-0.398	0.295	0.177	0.000	0.001	0.654	<b>-0.001</b>	<b>0.000</b>	<b>0.000</b>
High School/Less	-0.84	0.585	0.151	-0.364	0.303	0.229	0.240	0.261	0.358	0.072	0.227	0.752
Some college	0.133	0.454	0.770	-0.185	0.274	0.499	0.034	0.230	0.882	0.145	0.207	0.484
College Graduate	-0.118	0.411	0.774	-0.233	0.257	0.365	-0.017	0.200	0.933	0.291	0.197	0.139
Income \$25K	-0.572	0.604	0.343	<b>-0.781</b>	<b>0.370</b>	<b>0.035</b>	0.077	0.277	0.781	0.006	0.276	0.982
Income \$25-39K	0.229	0.581	0.693	<b>-0.717</b>	<b>0.321</b>	<b>0.025</b>	-0.267	0.261	0.306	0.087	0.251	0.729
Income \$40-49K	0.16	0.585	0.785	-0.161	0.331	0.628	-0.258	0.264	0.328	-0.396	0.261	0.130
Income \$50-74K	-0.42	0.477	0.379	-0.300	0.306	0.326	-0.059	0.227	0.795	-0.108	0.218	0.619
Income \$75-99K	0.771	0.549	0.160	-0.501	0.330	0.129	0.318	0.237	0.180	0.191	0.224	0.396
Cutpoint 1	-3.466	1.091		-4.969	0.714		-3.130	0.458		-3.762	0.442	
Cutpoint 2	-1.916	1.051		-3.613	0.655		-1.604	0.404		-2.224	0.399	
Cutpoint 3	1.099	1.055		-1.246	0.647		0.618	0.391		0.187	0.385	
N	358			1336			889			1069		
Log likelihood	-247.5			-900.11			-800.5			-955.8		
Pseudo R2	0.1923			0.0849			0.0934			0.0484		
LR chi2	76.84, 19 d.f. p<.001			92.23, 19 d.f. p<.001			132.67, 18 d.f. p<.001			225.95, 18 d.f. p<.001		

Dependent Variable: How confident are you that your ballot will be counted accurately in this election? (Utah and Ohio 2006). How confident are you that your ballot was counted accurately in the 2004 election? (Utah 2004).

**Table 6, Predicted Probabilities for Fair Outcome and Confidence Ballot will be Counted Accurately**

<b>Fair Outcome</b>									
	Not at all confident		Not too confident		Somewhat confident		Very confident		Probability Change for "very confident"
	Poll Worker Less than Excellent	Poll Worker Excellent	Poll Worker Less than Excellent	Poll Worker Excellent	Poll Worker Less than Excellent	Poll Worker Excellent	Poll Worker Less than Excellent	Poll Worker Excellent	
Utah 2004	0.02	0.00	0.06	0.01	0.54	0.25	0.38	0.74	0.36
Utah 2006	0.02	0.01	0.05	0.02	0.36	0.20	0.57	0.77	0.20
Franklin County Ohio 2006	0.12	0.06	0.25	0.16	0.50	0.53	0.14	0.24	0.10
Summit County Ohio 2006	0.11	0.05	0.25	0.15	0.53	0.57	0.12	0.22	0.10
<b>Counted Accurately</b>									
	Not at all confident		Not too confident		Somewhat confident		Very confident		Probability Change for "very confident"
	Poll Worker Less than Excellent	Poll Worker Excellent	Poll Worker Less than Excellent	Poll Worker Excellent	Poll Worker Less than Excellent	Poll Worker Excellent	Poll Worker Less than Excellent	Poll Worker Excellent	
Utah 2004	0.01	0.00	0.05	0.01	0.51	0.25	0.42	0.73	0.31
Utah 2006	0.01	0.00	0.03	0.01	0.27	0.15	0.69	0.83	0.14
Franklin County Ohio 2006	0.07	0.03	0.19	0.10	0.50	0.46	0.23	0.40	0.17
Summit County Ohio 2006	0.03	0.02	0.11	0.06	0.51	0.39	0.35	0.54	0.18